

What is claimed is;

1. A radiation image read-out apparatus which comprises a radiation image convertor panel, a stimulating light projecting means which projects stimulating light onto the radiation image convertor panel, and a detecting means which detects stimulated emission emitted from the radiation image convertor panel upon exposure to the stimulating light beam and reads out a radiation image recorded on the radiation image convertor panel, wherein the improvement comprises that

the stimulating light projecting means projects, onto the radiation image convertor panel, stimulating light in a wavelength range where the rate of change of the intensity of the stimulated emission to a given change of the wavelength of the stimulating light is not larger than 1.0%/nm and is not smaller than -1.0%/nm.

2. A radiation image read-out apparatus as defined in Claim 1 in which the rate of change of the intensity of the stimulated emission to a given change of the wavelength of the stimulating light is not larger than 0.5%/nm and is not smaller than -0.5%/nm.

3. A radiation image read-out apparatus as defined in Claim 1 in which the stimulating light projecting means comprises a plurality of stimulating light sources which emit stimulating light of different wavelengths and projects synthesized stimulating light including the stimulating light of different wavelengths onto the radiation image convertor

panel so that the stimulating light of different wavelengths are simultaneously projected on the same position on the radiation image convertor panel.

4. A radiation image read-out apparatus as defined in  
5 Claim 1 in which the radiation image convertor panel has a stimuable phosphor layer formed of alkali halide stimuable phosphors. .

5. A radiation image read-out apparatus as defined in  
Claim 4 in which the alkali halide stimuable phosphors are  
10 represented by formula  $MX:A$ , wherein M represents at least one of K, Rb and Cs, X represents at least one of Cl, Br and I, and A represents  $Eu^{2+}$  or  $Tl^{+}$ .